```
HHH         HHH  LLL              DDDDDDDDDDDD
HHH         HHH  LLL              DDDDDDDDDDDD
HHH         HHH  LLL              DDDDDDDDDDDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLLLLLLLLLLLLLLL DDDDDDDDDDDD
HHH         HHH  LLLLLLLLLLLLLLLL DDDDDDDDDDDD
HHH         HHH  LLLLLLLLLLLLLLLL DDDDDDDDDDDD
```

```
HH      HH  LL          DDDDDDDD    DDDDDDDD      AAAAAA    TTTTTTTTTT    AAAAAA
HH      HH  LL          DDDDDDDD    DDDDDDDD      AAAAAA    TTTTTTTTTT    AAAAAA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HHHHHHHHHH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HHHHHHHHHH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AAAAAAAAAA      TT      AAAAAAAAAA
HH      HH  LL          DD      DD  DD      DD  AAAAAAAAAA      TT      AAAAAAAAAA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA      ....
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA      ....
HH      HH  LLLLLLLLLL  DDDDDDDD    DDDDDDDD    AA      AA      TT      AA      AA      ....
HH      HH  LLLLLLLLLL  DDDDDDDD    DDDDDDDD    AA      AA      TT      AA      AA      ....

LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

```
0000          .TITLE  HLDDATA - HLD DATA STORAGE
0000          .IDENT  'V04-000'
0000
0000  ;
0000  ;*******************************************************************
0000  ;*                                                                 *
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0000  ;*                                                                 *
0000  ;*                                                                 *
0000  ;*******************************************************************
0000  ;
0000
0000  ;++
0000  ; FACILITY: DECNET HOST LOADER (HLD)
0000  ;
0000  ; ABSTRACT:
0000  ;
0000  ;       HLD IS A COMPONENT OF DECNET-VAX. IT PROVIDES ACCESS TO
0000  ;       RSX11S TASK IMAGES STORED ON A VAX/VMS SYSTEM.
0000  ;
0000  ; ENVIRONMENT:
0000  ;
0000  ;       THE HLD IMAGE EXECUTES IN THE CONTEXT OF A PROCESS CREATED BY
0000  ;       NETACP. IT RUNS IN USER MODE AND REQUIRES NETWORK PRIVILEGE.
0000  ;
0000  ; AUTHOR: SCOTT G. DAVIS,       CREATION DATE: 11-MAY-79
0000  ;
0000  ; MODIFICATIONS:
0000  ;
0000  ;--
0000
0000  ;
0000  ; INCLUDE FILES:
0000  ;
0000  ;
0000  ; MACROS:
0000  ;
0000  ;       NONE
0000  ;
00000000      .PSECT  HLD$PURE        NOSHR,NOEXE,RD,NOWRT,LONG
0000  ;
```

```
                                  0000    ; EQUATED SYMBOLS:
                                  0000    ;
                         00000200 0000    HLD_DISK_SIZE = 512                     ;
                                  0000
                         00000000 0000    HLD$T_TASK == 0                         ; OPDATA offset to task name
                         00000000 0000    HLD$W_XFR_SIZE == 0                     ; OPTDATA offset to transfer size
                         00000002 0000    HLD$B_NLUNS == 2                        ; OPTDATA offset to number of luns to fix
                         00000004 0000    HLD$W_PART_ADDR == 4                    ; OPDATA OFFSET TO PARTITION ADDRESS
                         00000006 0000    HLD$W_PART_SIZE == 6                    ; OPDATA OFFSET TO PARTITION SIZE
                         00000008 0000    HLD$B_LUN_FLAG == 8                     ; OPDATA OFFSET TO LUN-FIXING FLAG
                         00000009 0000    HLD$B_REQUEST == 9                      ; OPDATA OFFSET TO REQUEST TYPE
                         0000000A 0000    HLD$L_OVL_VBN == 10                     ; OVERLAY REQUEST VBN
                                  0000    ;
                                  0000    ; GLOBAL STORAGE:
                                  0000    ;
                                  0000    ; DEVICE NAME AND LOGICAL NAME DESCRIPTOR BLOCKS WITH TEXT
                                  0000    ;
                                  0000
                                  0000    HLD$GQ_LNKNAM::                         ; DEVICE NAME DESCRIPTOR BLOCK
   3A 54 45 4E 5F 00000008'010E0000' 0000         .ASCID  /_NET:/                 ;  FOR THE LINK
                                  000D    HLD$GQ_SYSNAM::                         ; LOGICAL NAME DESCRIPTOR BLOCK
45 4E 24 53 59 53 00000015'010E0000' 000D         .ASCID  /SYS$NET/               ;  FOR SYS$NET
                               54 001B
                                  001C
                         00000000 001C         .PSECT  HLD$IMPURE      NOSHR,NOEXE,RD,WRT,LONG
                                  0000
                         00000008 0000    HLD$GQ_NCBDESC::        .BLKQ   1       ; NCB DESCRIPTOR
                         00000048 0008    HLD$GT_NCBBUF:: .BLKB   64              ; NCB BUFFER
                         0000004C 0048    HLD$GQ_NODEDESC::       .BLKL   1       ; NODE NAME DESCRIPTOR
                         00000008' 004C                   .ADDRESS        HLD$GT_NCBBUF ; NODE IS IN BUFFER
                         00000058 0050    HLD$GQ_LNKIOSB::        .BLKQ   1       ; LOGICAL LINK IOSB
                         000000C8 0058    HLD$GQ_PRTBUF:: .LONG   200             ; PRINT BUFFER DESCRIPTOR
                         00000200' 005C           .ADDRESS        HLD_AB_PRTBUF
                         00000062 0060    HLD$GW_LNKCHN:: .BLKW   1               ; LOGICAL LINK CHANNEL
                             0000' 0062   HLD$GW_IOFUNC:: .WORD   IO$_ACCESS      ; HOLDS I/O FUNCTION - START WITH CONFIRM
                             0000' 0064   HLD$GW_SAVEFUNC::       .WORD   IO$_WRITEVBLK ; HOLD NETWORK READ/WRITE FUNCTION
                                  0066    HLD$GL_IOROUT_1::
                         00000000' 0066           .ADDRESS        HLD$DISK_READ   ; ADDRESS OF I/O ROUTINE 1
                                  006A    HLD$GL_IOROUT_2::
                         00000000' 006A           .ADDRESS        HLD$NET_IO      ; ADDRESS OF I/O ROUTINE 2
                         00000000 006E    HLD$GL_IOPARAM1::       .LONG   0       ; HOLDS I/O P1
                         00000076 0072    HLD$GL_IOPARAM2::       .BLKL   1       ; HOLDS I/O P2
                         0000007A 0076    HLD$GT_OPER::   .BLKA   1               ; HOLDS ADDRESS OF REQUEST TYPE
                         0000007C 007A    HLD$GW_PRTLEN:: .BLKW   1               ; LENGTH OF PRINT BUFFER
                             0200 007C    HLD$GW_IOLEN::  .WORD   512             ; Length of non-overlay block transfer
                               00 007E    HLD$GB_ERRORFLG::       .BYTE   0       ; NUMBER OF ERROR MESSAGE, IF ANY
                               00 007F    HLD$GB_MAPFLAG::        .BYTE   0       ; TASK FLAG -   0=>MAP (DEFAULT)
                                  0080                                            ;               1=>UNM
                               01 0080    HLD$GB_GPFLAG:: .BYTE   1               ; General purpose task flag - 1=>GP
                               00 0081    HLD$GB_LUNFLAG::        .BYTE   0       ; Lun-fixing flag
                               06 0082    HLD$AT_TSKBUF:: .BYTE   6               ; FIXED LENGTH OF TASK NAME
                         00000089 0083                    .BLKB   6               ; FOR HOLDING COUNTED DECODED TASK NAME
                                  0089
                                  0089
                                  0089           .ALIGN  LONG                     ; REQUIRED FOR FABS AND RABS
                                  008C
                                  008C    HLD$TSKFAB::                            ; FAB FOR TASK FILE
```

```
008C          $FAB    DNM=<.TSK> -                  ; DEFAULT FILE TYPE
008C                  FAC=<BIO,GET,PUT>             ; BLOCK I/O, READ, WRITE
00DC
00DC  HLD$TSKRAB::                                  ; RAB FOR TASK FILE
00DC          $RAB    FAB=HLD$TSKFAB -              ;
00DC                  BKT=1 -                       ; START WITH LABEL BLOCK
00DC                  ROP=BIO -                     ; BLOCK I/O
00DC                  UBF=HLD$AB_BUFFER -           ; BUFFER
00DC                  USZ=HLD_DISK_SIZE             ; BLOCK SIZE
0120
000000B8  0120  HLD$GL_TSKFNA == HLD$TSKFAB+FAB$L_FNA   ; FOR STUFFING FILESPEC ADDRESS
000000C0  0120  HLD$GB_TSKFNS == HLD$TSKFAB+FAB$B_FNS   ; FOR STUFFING FILESPEC SIZE
00000114  0120  HLD$GL_TSKBKT == HLD$TSKRAB+RAB$L_BKT   ; FOR STUFFING BLOCK NUMBER
0120
0120          .ALIGN  LONG
0120
0120  HLD$PRTFAB::                                  ; FILE ACCESS BLOCK
0120          $FAB    FAC=PUT-                      ;
0120                  RAT=CR-                       ;
0120                  FNM=<SYS$OUTPUT>              ;
0170  HLD$PRTRAB::                                  ; RECORD ACCESS BLOCK
0170          $RAB    FAB=HLD$PRTFAB-               ;
0170                  RBF=HLD_AB_PRTBUF-            ;
0170                  RSZ=0                         ; T.B.S. DYNAMICALLY
01B4
01B4          .ALIGN  LONG
01B4
01B4  HLD$DATFAB::                                  ; FAB FOR TASK HLD.DAT TASK FILE
01B4          $FAB    FAC=GET -                     ;
01B4                  FNM=<SYS$SYSTEM:HLD.DAT> - ;
01B4                  FOP=SQO                       ;
0204
0204  HLD$DATRAB::                                  ; RAB FOR HLD.DAT
0204          $RAB    FAB=HLD$DATFAB -              ;
0204                  UBF=HLD_AB_NAMEBUF -          ;
C204                  USZ=200                       ;
0248
00000226  0248  HLD$GW_DATRSZ == HLD$DATRAB+RAB$W_RSZ   ; ADDRESS OF RECORD LENGTH
0000022C  0248  HLD$GL_DATRBF == HLD$DATRAB+RAB$L_RBF   ; ADDRESS OF RECORD POINTER
0000024C  0248  HLD$GL_RECEND:: .BLKL   1               ; POINTER BEYOND END OF RECORD
024C
000002D0  024C  HLD_AB_NAMEBUF: .BLKB   132             ; FOR MATCHING TASK NAME, ETC.
02D0            HLD_AB_PRTBUF:                          ; PRINT BUFFER
00000398  U2D0          .BLKB   200                     ; SAVE SOME SPACE
00000598  0398  HLD$AB_BUFFER:: .BLKB   HLD_DISK_SIZE   ; I/O BUFFER
0598
0598          .END
```

```
$$.TAB                    = 00000204 R     02
$$.TABEND                 = 00000248 R     02
$$.TMP                    = 00000000
$$.TMPX                   = 0000000E R     04
$$.TMPX1                  = 00000012
FAB$B_DNS                 = 00000035
FAB$B_FNS                 = 00000034
FAB$C_BID                 = 00000003
FAB$C_BLN                 = 00000050
FAB$C_SEQ                 = 00000000
FAB$C_VAR                 = 00000002
FAB$L_ALQ                 = 00000010
FAB$L_DNA                 = 00000030
FAB$L_FNA                 = 0000002C
FAB$L_FOP                 = 00000004
FAB$V_BIO                 = 00000005
FAB$V_CHAN_MODE           = 00000002
FAB$V_CR                  = 00000001
FAB$V_FILE_MODE           = 00000004
FAB$V_GET                 = 00000001
FAB$V_LNM_MODE            = 00000000
FAB$V_PUT                 = 00000000
FAB$V_SQO                 = 00000006
FAB$W_GBC                 = 00000048
HLD$AB_BUFFER               00000398 RG    02
HLD$AT_TSKBUF               00000082 RG    02
HLD$B_CUN_FLAG            = 00000008  G
HLD$B_NLUNS               = 00000002  G
HLD$B_REQUEST             = 00000009  G
HLD$DATFAB                  000001B4 RG    02
HLD$DATRAB                  00000204 RG    02
HLD$DISK_READ               ********   X   02
HLD$GB_ERRORFLG             0000007E RG    02
HLD$GB_GPFLAG               00000080 RG    02
HLD$GB_LUNFLAG              00000081 RG    02
HLD$GB_MAPFLAG              0000007F RG    02
HLD$GB_TSKFNS             = 000000C0 RG    02
HLD$GL_DATRBF             = 0000022C RG    02
HLD$GL_IOPARAM1             0000006E RG    02
HLD$GL_IOPARAM2             00000072 RG    02
HLD$GL_IOROUT_1             00000066 RG    02
HLD$GL_IOROUT_2             0000006A RG    02
HLD$GL_RECEND               00000248 RG    02
HLD$GL_TSKBKT             = 00000114 RG    02
HLD$GL_TSKFNA             = 000000B8 RG    02
HLD$GQ_LNKIOSB              00000050 RG    02
HLD$GQ_LNKNAM               00000000 RG    01
HLD$GQ_NCBDESC              00000000 RG    02
HLD$GQ_NODEDESC             00000048 RG    02
HLD$GQ_PRTBUF               00000058 RG    02
HLD$GQ_SYSNAM               0000000D RG    01
HLD$GT_NCBBUF               00000008 RG    02
HLD$GT_OPER                 00000076 RG    02
HLD$GW_DATRSZ             = 00000226 RG    02
HLD$GW_IOFUNC               00000062 RG    02
HLD$GW_IOLEN                0000007C RG    02
HLD$GW_LNKCHN               00000060 RG    02
HLD$GW_PRTLEN               0000007A RG    02
HLD$GW_SAVEFUNC             00000064 RG    02
HLD$L_OVL_VBN             = 0000000A  G
HLD$NET_IO                  ********   X   02
HLD$PRTFAB                  00000120 RG    02
HLD$PRTRAB                  00000170 RG    02
HLD$TSKFAB                  0000008C RG    02
HLD$TSKRAB                  000000DC RG    02
HLD$T_TASK                = 00000000  G
HLD$W_PART_ADDR           = 00000004  G
HLD$W_PART_SIZE           = 00000006  G
HLD$W_XFR_SIZE            = 00000000  G
HLD_AB_NAMEBUF              0000024C R     02
HLD_AB_PRTBUF               000002D0 R     02
HLD_DISK_SIZE             = 00000200
IO$_ACCESS                  ********   X   02
IO$_WRITEVBLK               ********   X   02
RAB$B_RAC                 = 0000001E
RAB$C_BID                 = 00000001
RAB$C_BLN                 = 00000044
RAB$C_SEQ                 = 00000000
RAB$L_BKT                 = 00000038
RAB$L_CTX                 = 00000018
RAB$L_RBF                 = 00000028
RAB$L_ROP                 = 00000004
RAB$V_BIO                 = 0000000B
RAB$W_RSZ                 = 00000022
```

```
                                  +----------------+
                                  ! Psect synopsis !
                                  +----------------+

PSECT name                      Allocation          PSECT No.  Attributes
----------                      ----------          ---------  ----------
.  ABS  .                       00000000  (    0.)  00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
HLD$PURE                        0000001C  (   28.)  01 (  1.)  NOPIC   USR   CON   REL   LCL NOSHR NOEXE   RD  NOWRT NOVEC LONG
HLD$IMPURE                      00000598  ( 1432.)  02 (  2.)  NOPIC   USR   CON   REL   LCL NOSHR NOEXE   RD    WRT NOVEC LONG
$ABS$                           00000000  (    0.)  03 (  3.)  NOPIC   USR   CON   ABS   LCL NOSHR   EXE   RD    WRT NOVEC BYTE
$RMSNAM                         00000020  (   32.)  04 (  4.)  NOPIC   USR   CON   REL   LCL NOSHR   EXE   RD    WRT NOVEC BYTE

                                +-------------------------+
                                ! Performance indicators !
                                +-------------------------+

Phase                     Page faults    CPU Time       Elapsed Time
-----                     -----------    --------       ------------
Initialization                     35    00:00:00.08    00:00:01.23
Command processing                132    00:00:00.60    00:00:03.67
Pass 1                            193    00:00:04.66    00:00:14.55
Symbol table sort                   0    00:00:00.37    00:00:00.64
Pass 2                             55    00:00:00.89    00:00:03.30
Symbol table output                12    00:00:00.08    00:00:00.20
Psect synopsis output               4    00:00:00.03    00:00:00.05
Cross-reference output              0    00:00:00.00    00:00:00.00
Assembler run totals              434    00:00:06.71    00:00:23.64

The working set limit was 900 pages.
20804 bytes (41 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 354 non-local and 0 local symbols.
160 source lines were read in Pass 1, producing 20 object records in Pass 2.
17 pages of virtual memory were used to define 12 macros.

                                         +---------------------------+
                                         ! Macro library statistics !
                                         +---------------------------+

Macro library name                        Macros defined
------------------                        --------------
_$255$DUA28:[HLD.OBJ]HLD.MLB;1                          0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                       9
TOTALS (all libraries)                                  9

499 GETS were required to define 9 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:HLDDATA/OBJ=OBJ$:HLDDATA MSRC$:HLDDATA/UPDATE=(ENH$:HLDDATA)+LIB$:HLD/LIB
```

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INIT

HLDPRINT LIS

IMGDMPDEF SDL

INIT MAP

HLDDATA LIS

INIBAD LIS

INIDEF B32

HLDMAIN LIS

ANALIMDMP LIS

IMGDMP

ANALIMDMP MAP

IMGDMP MAP

HLDIO LIS

DISPIMDMP LIS

HLDFILE LIS

HLDTASK LIS

IMGDMP LIS

INIALL LIS